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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,235	03/02/2004	Junichi Yamamoto	890050.464	3602
500	7590	12/27/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			MURALIDAR, RICHARD V	
701 FIFTH AVE			ART UNIT	PAPER NUMBER
SUITE 6300			2838	
SEATTLE, WA 98104-7092				

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/791,235

Applicant(s)

YAMAMOTO, JUNICHI

Examiner

Richard V. Muralidar

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/02/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/2/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

Figures 2-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. "Switching Power Supply Unit with Self-Oscillation Stop Circuit" is suggested.

### ***Abstract***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

A substitute abstract in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. Avoid such phrases as "in the thus."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fronk [US6181578].

With respect to claim 1, Fronk discloses a switching power supply unit [Fig. 5] comprising a transformer [Fig. 5 transformer 12], a switching circuit disposed on a primary side of the transformer [Fig. 5 circuit formed by signal generator 40, voltage supply 11, and power switch 16], a self-driven type synchronous rectifier circuit disposed on a secondary side of the transformer and including at least one rectifier switch [Fig. 5 forward rectifier 112], and a self-oscillation stop circuit disposed on the secondary side of the transformer [Fig. 5 formed by quench FET 114, shadow transistor 42, rectifier 116, diode 48, and resistor 44; col. 1 lines 43-47 and col. 3 lines 33-37] and adapted to turn off the at least one rectifier switch [Fig. 5 free wheeling rectifier 116] when a voltage between opposite ends of the at least one rectifier switch exceeds a predetermined value [col. 3 lines 33-37 and col. 6 lines 21-27].

With respect to claim 2, Fronk discloses a Zener diode [Fig. 5 Zener diode 48] connected in parallel with the at least one rectifier switch [Fig. 5 free wheeling rectifier 116].

With respect to Claim 3, Fronk discloses the Zener voltage of the Zener diode is determined so as to be higher than a voltage applied between the opposite ends of the at least one rectifier switch during ordinary operation [the zener diode functions as a protective voltage regulator when connected in parallel across a voltage sensitive device, such as rectifier 116, Fig. 5. If the zener voltage rating were not chosen high enough for ordinary operation, rectifier 116 in parallel would receive a destructive over-voltage. Therefore the determined voltage across the zener 48 must be higher than the voltage across the rectifier 116].

With respect to Claim 4, Fronk discloses that the Zener voltage of the Zener diode is determined so as to be lower than a withstand voltage of the at least one rectifier switch [in Fig. 5, the voltage of the zener 48 must be lower than the withstand voltage of rectifier 116, or the rectifier 116 would receive a destructive over-voltage before the zener could reverse breakdown to protect the rectifier 116].

With respect to Claims 5-8, Fronk discloses that the self-oscillation stop circuit [Fig. 5 formed by quench FET 114, shadow transistor 42, rectifier 116, diode 48, and resistor 44; col. 1 lines 43-47 and col. 3 lines 33-37] is constituted so as to turn off the at least one rectifier switch [Fig. 5 free wheeling rectifier 116] by substantially short circuiting a gate and a source of the at least one rectifier switch [in Fig. 5, the output of the discharge network signal at node 410 turns on and off rectifier 116, which starts and stops free wheeling/oscillations by shorting the gate and source of rectifier 116 through quench FET 114 and inductor 118].

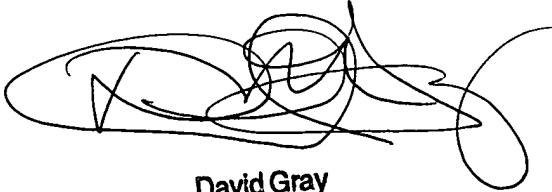
### ***Conclusion***

The following reference is cited for its disclosure of an oscillation stop circuit for a switching power supply. Takegami [US2002/0131282A1] uses a similar arrangement of transistors and a zener diode to stop oscillations in the switching power supply. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard V. Muralidar whose telephone number is 571-272-8933. The examiner can normally be reached on Monday to Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on Monday to Friday 8-5. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RVM  
12/21/2005



David Gray  
Primary Examiner